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Attached is the daily news report for June 14.

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UTAH - TOP STORIES - June 14, 2017

1. <u>Deciphering protections inside Bears Ears monument designation</u>

The Deseret News, June 13 | Amy Joi O'Donoghue

SALT LAKE CITY — When Interior Secretary Ryan Zinke announced a preliminary recommendation that contemplates shrinking the boundaries of the Bears Ears National Monument, one of the key points he emphasized is that some of the land is already subject to special management restrictions.

2. <u>NATIONAL MONUMENTS: Zinke's Bears Ears report featured photo of another</u> site

E & E News, June 14 | Jennifer Yachnin

Utah is home to more than 34 million acres of federal lands, including various national parks and monuments — so maybe it's no wonder everyone seems to mix them up when it comes time to post a photograph of Bears Ears National Monument.

3. Large amount of human-caused fires frustrate Utah emergency crews

KUTV 2 News, June 13 | DJ Bolerjack

St. George, Utah — (KUTV) It's been a busy season for firefighters already with dozens of human-caused fires popping up all of the state.

4. Op-ed: Why the next generation needs public lands

High Country News, June 13 | Ernie Atencio

As I watch at-risk urban kids from Salt Lake City scrambling up slickrock canyons to see ancient Puebloan ruins, I see their faces come alive as they absorb their spectacular surroundings. Attitudes chill, eyes and smiles get wider. Something stirs within them.

5. New Women's Hunting Group Joins Public Lands Fight

Utah Public Radio, June 13 | Katherine Taylor

Artemis is an alliance of ten women from six Western states, including Wyoming, Montana, and Idaho, who are fighting for a voice in the fishing, angling and conservation communities.



6. Contested National Monuments in Utah House Treasure Troves of Fossils

Inside Science, June 13 | Nala Rogers

(Inside Science) -- Seventy-five million years ago, a family of tyrannosaurs fled through a forest engulfed in flames. The predators -- an adult more than 30 feet long, an adolescent two-thirds its size, and a baby no bigger than a Shetland pony -- emerged from the inferno onto a muddy shoreline and plunged into the lake, desperate to escape the heat.

7. Obama Conserved 1.3 Million Acres in Utah—Can Trump Undo That?

The Atlantic, June 14 | Robinson Meyer

In the final days of 2016, President Barack Obama made a final addition to the conserved lands of the United States.

8. NATIONAL MONUMENTS: Bishop 'happier' if Zinke had revoked Bears Ears

E & E News, June 14 | Kellie Lunney

The chairman of the House Natural Resources Committee said yesterday that he was "a little" disappointed that Interior Secretary Ryan Zinke didn't recommend revoking the status of Bears Ears National Monument in his interim review.

E&E/NATIONAL NEWS – TOP STORIES

1. Experts: Captive breeding of sage grouse won't work

High Country News, June 14 | Angus M Thuermer Jr., Andrew Graham/Wyofile

Prominent greater sage grouse conservationists say Interior Secretary Ryan Zinke's plan to consider captive breeding of the bird would meet a dead end.

2. OIL AND GAS: Interior halts restrictions on methane emissions

E & E News, June 14 | Ellen M. Gilmer

The Trump administration has indefinitely postponed upcoming deadlines for oil and gas companies to slash greenhouse gas emissions on public lands.



3. OIL AND GAS: Industry groups support EPA in methane litigation

E & E News, June 14 | Amanda Reilly

The oil and gas industry today moved to defend the Trump administration's decision to suspend Obama-era methane standards.

4. CARBON CAPTURE: 15 Dems press for funding 'at the highest possible level'

E & E News, June 14 | Christa Marshall

Senate Democrats and renewable groups are pressing congressional appropriators to protect Department of Energy funding for carbon capture, utilization and storage from steep budget cuts.

5. COAL: Worldwide demand falls again

E & E News, June 14 | Adam Vaughan, The Guardian

Global demand for coal has fallen for the second consecutive year, according to a BP study, helped by the US and China burning less of the dirtiest fossil fuel.



UTAH - FULL STORY

1. Deciphering protections inside Bears Ears monument designation

The Deseret News, June 13 | Amy Joi O'Donoghue

SALT LAKE CITY — When Interior Secretary Ryan Zinke announced a preliminary recommendation that contemplates shrinking the boundaries of the Bears Ears National Monument, one of the key points he emphasized is that some of the land is already subject to special management restrictions.

Zinke's interim report released Monday notes there are 11 wilderness study areas inside the monument that comprise 381,000 acres and are managed by the Bureau of Land Management. The lands have to be in the same or better condition than they were 41 years ago to ensure Congress has the ability to invoke permanent wilderness protection.

That year is significant, 1976, when Congress passed the Federal Lands Policy Management Act that set up the majority of Utah's wilderness study areas — vast amounts of land that have remained in limbo since then.

There is also the Dark Canyon Wilderness of 46,353 acres on Forest Service land administered by that federal agency that has permanent wilderness status and is managed as such.

The BLM's resource management plan and maps of the region show that two-thirds of the land inside the 1.35-million acre monument is in some sort of protected status, withdrawn from mineral development.

That includes special recreation management areas, wilderness study areas and 48,000 acres of lands managed for wilderness and identified for protections after an exhaustive 1999 inventory of lands with wilderness characteristics inside Utah.

What can you do in a wilderness study area and what's restricted?

In 2012, the BLM released a revised and more aggressive policy on management of the study areas, which allows nonmotorized, primitive recreational activities such as backpacking, horseback riding, rafting, fishing and hunting.



Zinke's preliminary recommendation asks Congress to clarify management practices of study areas within a monument's boundaries because he says the land uses under each designation may be at odds with each other.

In a study area, mechanized access is generally prohibited, except on already established routes, including mountain biking. Outright wilderness designations, such at Dark Canyon, prohibit mechanized access altogether, including equipment for fighting wildfires or watershed restoration — unless an emergency exception is granted.

Within the Bears Ears monument boundaries there are also special recreation management areas that include Grand Gulch and Cedar Mesa that have been withdrawn from potential mineral development and in some instances overlap lands that are being managed to protect wilderness characteristics.

No one appears to be particularly fond of wilderness study areas, but for vastly different reasons.

The Wilderness Society's Phil Hanceford, who is conservation director for the BLM Action Center, said those areas may be managed as wilderness now — but that could change with an act of Congress.

"They are absolutely vulnerable to going away," Hanceford said, adding that Zinke's preliminary directive for Congress to review their intent doesn't assuage any of those fears.

Rep. Rob Bishop, R-Utah, chairman of the House Committee on Natural Resources, called the study areas obnoxious because they include such wide discretion.

"A wilderness designation that is congressionally done is clearly wilderness," Bishop said.

Study areas just have to have some "characteristic," which he maintains can evolve from practically any landscape if it is left unattended for long enough.

"That is why it is such a concern for people in the counties and in states around the West," Bishop said. "Nobody who lives east of Denver knows what a (wilderness study area) is or cares about it."



Hanceford said if Utah had ever had a wilderness bill to permanently move the study areas into designated wilderness, the state might be ahead in the conservation game like some of its neighbors.

In Arizona, for example, there are only two wilderness study areas that total 46,000 acres. The majority were protected as permanent wilderness — 47 of them — at 1.4 million acres.

Utah, in contrast, has 86 wilderness study areas that encompass 3.2 million acres.

Bishop countered that the study areas are problematic in that they are de facto wilderness that subjugate multiple uses — putting other uses of the land like recreation or grazing at a disadvantage.

"I think Zinke is wise, very wise, to ask Congress to clarify these designations that should never have been been done by executive fiat," he said.

If a good chunk of the land inside the Bears Ears monument footprint already has management restrictions for wilderness quality, why is an official designation so critical for monument supporters?

Hanceford said a monument stitches protections for the landscape into one congruent fabric.

"The monument ties together the resources as a whole," he said. "We, as well as others, were pushing for a monument boundaries that were larger. The reason we were pushing for the boundary to be so large is to encompass all of the monument objects of interest."

Zinke said there is a definite need for protecting those objects of interest, referring to monument boundaries that would encircle high-density areas of cultural artifacts.

Groups such as Archaeology Southwest say that type of conservation approach misses the mark, and protecting the entire landscape preserves it for the ancient stories it tells.

Monument detractors, however, say some of that land has to accommodate the stories of other uses, including ranching, tourism and access via vehicle, the ability to fight fires and restore watersheds.



There are distinct management differences between a study area and one already protected as wilderness, according to federal agencies.

As an example, the operation of drones is not prohibited in study areas but is outlawed in permanent designations.

"That is a common misconception on the part of the public and others that they are managed the same, but there is quite a bit of discretion," said Allison Ginn, the National Conservation Lands program lead for the BLM in Utah.

"Our job as the executive branch is to make sure we don't constrain Congress' ability to ensure long-term management of these areas," Ginn said. "Many of these areas that exist are relatively undisturbed nature."

Zinke's preliminary recommendations point to the existing management as possibly protective enough.

He also added in Monday's teleconference that ultimately whatever decision is made, it has to come with land management resources to protect what is vital to tribes and other interests.

That means money on the ground.

Ginn said the visitor experience at places in southern Utah such as Bears Ears or Grand Staircase-Escalante are much different from what the public would encounter at national parks.

"These are essentially unmanaged lands where the visitor can decide what kind of experience they want as long as it is human-powered," she said.

Federal agencies such as the BLM and National Park Service are already in a budget shortfall for management of public lands — and there's no optimism that could change anytime soon.

Hanceford said his group, like others, encourage visitation to these wild places, push for conservation protections, and lobby for more money to put resources on the ground — a three-pronged approach.



DAILY NEWS REPORT - UTAH

Bishop said a monument designation doesn't come with anything beyond the paper it was written on, and management discretion and resources will come at the pleasure of a federal agency, subject to change at any time.

"Naming it a monument doesn't change the law (adding protections for cultural resources), and when they say a monument adds greater protections, that's crap," he said.

In the meantime, the landscape that is protected or not protected — depending on whom you talk to — is taking on new visitors because of the international debate over Bears Ears.

The BLM for years has been saying it is overwhelmed with the increased visitation to southern Utah, and resources have not increased.

Vandalism of cultural resources is a real risk by unknowing visitors. They don't know the difference between wilderness study areas, wilderness, special recreation areas, or what is managed by the BLM or Forest Service, or if it should matter. Where can they hike, four-wheel drive, hunt or camp?

Zinke's preliminary directive is under fire for its potential to unravel the monument designation. The battle cry is to protect the lands should the designation fall.

Like the land in Bears Ears — with its sandstone formations and wide-open canyons that have existed for millions of years, the forests and towering pines, barren stretches and rocky bluffs — the issue takes on many shapes.

"In the long term that is the idea, to have a conversation about what conservation looks like in the area for the future. And conversely what development would look like," Hanceford said.

BACK



2. NATIONAL MONUMENTS: Zinke's Bears Ears report featured photo of another site

E & E News, June 14 | Jennifer Yachnin

Utah is home to more than 34 million acres of federal lands, including various national parks and monuments — so maybe it's no wonder everyone seems to mix them up when it comes time to post a photograph of Bears Ears National Monument.

The Interior Department topped its Monday announcement that Secretary Ryan Zinke will recommend significant reductions to the 1.35-million-acre Bears Ears monument with a striking photo of the former Montana lawmaker looking over a vista of rocky, red hills.

But according to Interior's public account on photo sharing site Flickr, the image actually belongs to a <u>collection</u> of photos from Zinke's recent visit to Grand Staircase-Escalante National Monument.

The discrepancy was first reported by NPR's Utah station KUER.

The Interior Department did not immediately return a request for comment. Zinke is in the midst of a tour of New England states and is scheduled to visit the Katahdin Woods and Waters National Monument today.

The photographic mix-up is only the latest in a string of errors identifying the Bears Ears monument.

President Obama took flak in December when his administration tweeted out a photo of Arches National Park when he designated Bears Ears (Greenwire, Jan. 24).

At the time, Utah Republican lawmakers including Rep. Jason Chaffetz and Sen. Mike Lee slammed Obama on social media.

"Classic. @WhiteHouse pic is Arches not monuments. Couldn't find a pic of Bears Ears & doesn't even know where it is. #WorstPresidentEver," Chaffetz wrote in late December.

Similarly, in a video at the time, Lee compared Obama's error to President Clinton's decision to designate the Grand Staircase monument at a ceremony in Arizona.



"Look at this picture," Lee said. "That's not the Bears Ears area. ... We should be particularly disturbed by the fact that the same people who made this decision, the same people who decided to declare this national monument, apparently don't know the difference between the Bears Ears area, on the one hand, and Arches National Park."

E&E News has likewise made errors in identifying national monuments in Utah. In early May, this publication used a photo of Bears Ears instead of an image of the Grand Staircase-Escalante monument.

BACK

3. Large amount of human-caused fires frustrate Utah emergency crews

KUTV 2 News, June 13 | DJ Bolerjack

St. George, Utah — (KUTV) It's been a busy season for firefighters already with dozens of human-caused fires popping up all of the state.

Officials say there's been in the upwards of 45 human-caused fires in the last three days, which has proven a frustration for crews in southwest Utah.

Mike Melton with the Division of Forestry, Fire and State Lands said people need to understand that every spark can start a fire and they're putting men and women at risk.

"When you start putting people in harms way ... unnecessarily, that's something we take real serious," Melton said.

Melton used the Grass Valley fire as an example, just a few days into the fight a firefighter suffered heat exhaustion and was flown to the hospital.

"We expose the firefighters to the wild land fire and these things occur," Melton said.

There are currently six active fires around Utah, and if this continues, Melton believes it could be a very busy year for his crew. He's now asking for the public's help.

"If we work and live in the fire-prone environment, we need to be thinking ... what are the consequences of my actions if a fire were to start?" Melton said.



Many of these fires have been caused by fireworks, campfires and a number of other things. Melton said those people who chose to be irresponsible will pay.

"If you're responsible for causing a fire we're going to be investigating those fires and there is a good possibility we're coming after you for the costs." Melton said.

BACK

4. Op-ed: Why the next generation needs public lands

High Country News, June 13 | Ernie Atencio

As I watch at-risk urban kids from Salt Lake City scrambling up slickrock canyons to see ancient Puebloan ruins, I see their faces come alive as they absorb their spectacular surroundings. Attitudes chill, eyes and smiles get wider. Something stirs within them.

These high school and college-age youth are spending a weekend at Hovenweep National Monument in southeastern Utah through a program called YouthWorks in the Parks, which hopes to make them advocates for public lands. Later in the weekend, they will rappel into a canyon on the southern fringe of Bears Ears National Monument. There, they will have to work together and contort their bodies in creative ways to squeeze through a sinuous slot canyon.

Many of these young people have never set foot in a national park; some have never camped out and seen the night sky. This ancestral homeland of Pueblo peoples with its strange and twisted landscape is new and wild to them. Until they saw it, it was utterly unimaginable to them. Now they are seeing the world through new eyes, and what they see is bigger than anything they had thought.

I know these kids. I used to be one of them.

Before finding my way back to my northern New Mexico roots, I grew up mostly in inner-city Denver. I learned the tricks of the street, got involved in some risky and illegal activities, spent time in juvy, and dropped out of high school. When I finally forced myself back into the classroom, I just wanted a high school diploma.

An Outward Bound "hoods-in-the-woods" course changed all that. Three weeks of backpacking and mountaineering blew both my mind and my horizons wide open. Not long after, I was leading Outward Bound trips, working as a national park ranger, and teaching environmental



education programs. Eventually, I got into conservation work, and along the way earned several more "terminal degrees."

During my recent weekend with young people from Utah, I saw the horizon shift in similar ways for these youngsters. There must be a direct correlation between experiencing the physical horizons of canyon country and finding greater vision and ambitions in life. I've seen it enough times to know it's true.

These kids are already on a good path. YouthWorks caught them before they slipped through the deep cracks in our educational and legal systems. They come into the backcountry confident and ambitious.

The group was fascinated to learn about modern-day cultural connections to this landscape. You could hear a pin drop as they listened to a Navajo guide explain his people's relationship to the Puebloan sites. He tells them that he ritually prepares himself before he visits one in order to honor its spirit. The kids marvel at how the ancestral Pueblo people and Indian people still live in tune with the natural world and the seasons. There is even some anger that they have not learned anything about this in school.

One participant is amazed that these ancient ruins still stand, and that rangers and archaeologists work to protect them and explain them to the public. They are surprised to learn that this protected public land is their land. This idea of the commons is new but very welcome to young people who come from families whose own horizon does not usually include home ownership. And yet they learn on this weekend that they own part of a vast public estate.

The new Bears Ears National Monument, Hovenweep and our other tremendous gifts of public land hold all kinds of untapped opportunities, from broadening our experience of history and the outdoors to inspiring young people and helping them find their place in the world. As the weekend draws to a close, these young people may become the next generation of park advocates or find other ways to make the world a better place. But I realize that Youthworks in the Parks can only work if there are intact places to learn about and explore.

Beaming after his first trip to Arches and Canyonlands national parks, one young man says, "Now, there's this feeling that goes through me, and I get this strong urge to go."



Ernie Atencio is a contributor to Writers on the Range, the opinion service of High Country News. He is New Mexico program manager for the National Parks and Conservation Association.

BACK

5. New Women's Hunting Group Joins Public Lands Fight

Utah Public Radio, June 13 | Katherine Taylor

Artemis is an alliance of ten women from six Western states, including Wyoming, Montana, and Idaho, who are fighting for a voice in the fishing, angling and conservation communities.

In Greek mythology, Artemis is the goddess of the hunt, patron of hunters and wildlife. Artemis coordinator and founding member Jessi Johnson said that the group was formed through a shared love of hunting and the land.

"They're all these sort of get-out-there, boots on the ground, sportswomen who are hunters, anglers, conservationists, teachers, and people that are willing to stand up and talk," Johnson said. "Very often we see that conservation groups and basically anything that's hunting and angling related, is often marketed to men first, and I think that leaves out a really important voice, and an untouched voice, as far as conservation works."

During her seven years as an archer, she began to feel a real connection to the public lands she hunted on.

"When you're out there and you've built a relationship with an animal, and you've put a ton of work in, and you've practiced, you really become a part of the ecology of the place, and you see where you fit in a little more," Johnson said. "This is dwindling, and this is precious, and this is something we can't lose."

Johnson knows many women who are active members and mentors in their hunting and angling communities. One in five hunters are women, and women are about 25% of the nation's anglers. But proportionally, she adds, there are too few women in wildlife leadership positions.

As Artemis continues to grow, they have the potential for national growth, and are seeking to recruit women and men living in Utah.



"Anybody can be interested. You don't even have to be a woman, you can be a supporter and be a man," Johnson said. "It's just people who are wanting to see the women's voice accurately represented and realize that there is an unused conservation army out there, in women."

According to Johnson, recent efforts to transfer public land management to the states will be a priority for the group's policy work.

BACK

6. Contested National Monuments in Utah House Treasure Troves of Fossils

Inside Science, June 13 | Nala Rogers

(Inside Science) -- Seventy-five million years ago, a family of tyrannosaurs fled through a forest engulfed in flames. The predators -- an adult more than 30 feet long, an adolescent two-thirds its size, and a baby no bigger than a Shetland pony -- emerged from the inferno onto a muddy shoreline and plunged into the lake, desperate to escape the heat.

That's what Alan Titus thinks happened here. He picks up a lump of charcoal, a burned remnant of the once-lush forest, and crumbles it between his fingers. Inches away lies an exposed tyrannosaur bone, smooth and brown.

The landscape today is a rugged plateau of pale dirt, sagebrush and scraggly junipers. It's matched by Titus' stained khaki vest and the dry smile creasing his stubbled cheeks. A paleontologist with the Bureau of Land Management, he oversees all research on dinosaurs and other fossils in Utah's Grand Staircase-Escalante National Monument.

When President Bill Clinton proclaimed the now 1.9 million-acre monument in 1996, the decision infuriated many people in Utah -- Titus included. At the time, Titus was teaching geology at Snow College, a small two-year college in the middle of the state.

"I was just as upset and shocked as anyone that this had happened, because I liked to take my students down here on field trips and collect fossils," he says. The monument designation preserved many previous land uses, such as hunting and driving all-terrain vehicles, but it banned fossil collecting without a permit, says Titus.

But Titus's perspective soon changed. The national monument designation led to new funding and resources for scientists to study fossils in Grand Staircase-Escalante, and what they found



there was beyond all expectations. Rather than the familiar dinosaur species known from rocks of the same age in Canada and Wyoming, the Escalante rocks revealed a remarkable diversity of new species, upending scientists' understanding of climates and habitats during the age of dinosaurs by revealing a brand new ecosystem.

"To a scientist, it doesn't get any better than that, because you get into this business to make discoveries and contribute new knowledge," says Titus.

Now, some paleontologists believe the same thing could happen in America's newest national monument -- at least, assuming it remains a national monument. In December, then-President Barack Obama proclaimed a 1.35 million-acre region that lies just east of Grand Staircase-Escalante as Bears Ears National Monument, reigniting outrage among some residents of Utah and their elected representatives. Now, Bears Ears lies at the center of a political debate over public lands and presidential power.

Bears Ears and Grand Staircase-Escalante are among 27 monuments currently under examination, following an executive order issued by President Donald Trump in April. The order directs Interior Secretary Ryan Zinke to review certain national monuments designated since 1996. Bears Ears is the only monument the order calls out by name, and on Monday, Zinke issued an interim report recommending that it be cut down in size.

Experts have questioned whether it would be legal for Trump to alter Bears Ears' boundaries or its national monument status. If he tries, several groups have pledged to challenge him in court, according to reporting by the Salt Lake Tribune. On June 12, when Zinke announced his recommendation to shrink the Bears Ears, he also announced the extension of the public comment period for the monument until July 10.

The rocks Titus is excavating in Grand Staircase-Escalante preserve the final chapter of the age of dinosaurs. Bears Ears, researchers believe, holds different stories from earlier times -- how four-legged creatures first emerged from the sea, and how dinosaurs later rose to dominate the planet. The few paleontologists who have thus far explored in Bears Ears have made tantalizing finds, from plant-eating crocodiles to an amphibian whose skull is the size and shape of a toilet bowl lid.

But like Grand Staircase-Escalante 20 years ago, Bears Ears is in its paleontological infancy. The national monument designation, should it remain, could help researchers gain funding and



support to uncover its secrets. If Bears Ears is cut in size, then funding, land use and access, and protections could change, although the exact impact on the preservation and excavation of fossils is unclear.

Rainbows and unicorns

Titus discovered the tyrannosaur site while exploring Grand Staircase-Escalante in 2014, after a rainstorm exposed a bit of buried bone.

"When I brushed it, it turned out to be the lacrimal, which is the big, scabby protrusion over the eye of an adult tyrannosaur," says Titus. "I about wet my pants."

Finding even one tyrannosaur is incredibly rare, since the Cretaceous period landscape held far fewer of the big, warm-blooded predators than it did of their plant-eating prey. But as Titus dug around the skull, he soon found the bones of at least two more individuals. This is only the third or fourth site in North America where multiple tyrannosaurs have been found together, and it provides evidence that this area's species were social, says Titus.

There are many kinds of tyrannosaurs, and these bones belong to a smaller, more ancient relative of the famous Tyrannosaurus rex. The most likely species is Teratophoneus curriei, whose name means "monstrous murderer." It is one of two tyrannosaur species discovered so far in Grand Staircase-Escalante. The remains could also represent a new species, but if they are Teratophoneus, the adult will be the first full-grown specimen ever found, says Titus.

Since the discovery of the site in 2014, Titus's team has come back for 30-40 days of each year to expand the perimeter and depth of the search, as they did in May 2017. They have found more than 1,000 bones so far, and they expect to have the whole site excavated by 2019, says Titus.

The excavation site used to be at the bottom of a lake, and Titus and his team have found thousands of fish scales amongst the tyrannosaur bones. They have also found countless lumps of charcoal, and a few pieces of fossilized mud with imprints of burned wood, the rectangular crack patterns familiar to anyone who has watched a log shrink in a campfire. For Titus, the site paints a vivid picture of a family of tyrannosaurs caught in a fire.

Now, the paleontologist and his half-dozen volunteers crouch in the desert sun, using picks and brushes to remove rock and dirt in careful layers. A stuffed toy rainbow rests in the dirt beside them, while a pink unicorn perches in a tree, overlooking the scene with huge plastic eyes. The



incongruous mascots are here because of an exchange between Titus's field assistant and his former lab manager, which Titus now recounts.

"He's like, 'Hey, I hear Alan found this new tyrannosaur site. So what's it really like? 'Cause Alan, you know -- with him, everything's always rainbows and unicorns,'" says Titus. The field assistant reportedly answered, "Well, I'm afraid this time, it really is."

A surprise ecosystem

The site, now dubbed "Rainbows and Unicorns," is in a layered band of sandstone called the Kaiparowits formation, which was deposited about 75 million years ago. At that time, North America was bisected by a strip of ocean, turning the western side into a long, narrow continent called Laramidia.

Wyoming and Canada have rocks of the same age as Utah's Kaiparowits, and researchers are very familiar with the dinosaur species that are found in those northern deposits, says Titus. Everyone assumed the same species would show up in Grand Staircase-Escalante, too. But instead, practically everything Titus and his colleagues dug up was new to science.

As of now, Grand Staircase-Escalante has produced 12 named dinosaur species and five named marine reptiles, plus about 15 species that have not yet been described, says Titus. Some of his favorite finds include a duck-billed dinosaur specimen with preserved pebbly skin, and two new species of armored dinosaurs, which he describes as 12-foot-long horny toads with clubbed tails for whacking tyrannosaurs on the shins. It was probably almost impossible for tyrannosaurs to get at the horned dinosaurs, he adds; the creatures even had armored plates on their eyelids.

Titus and his colleagues think they know why the dinosaurs of Grand Staircase-Escalante are unique, although their explanation is still controversial. They believe Laramidia may have had distinct climatic zones separated by latitude, with a transition somewhere between Wyoming and southern Utah. Even though there was no physical barrier to stop dinosaurs from wandering across the transition, the species adapted to Wyoming's environment would have been unable to survive in southern Utah, and vice versa.

Northern Laramidia was probably cooler than southern Utah, with harsher weather and sparser plant life, says Titus. In contrast, southern Utah was a warm, wet coastal plain covered in lush forest, much like today's tropical rainforests.



"Just think of the Amazon," says Titus. "Loud bugs buzzing, and, you know, birds in the trees chirping. But they've all got teeth, and claws on their wings."

And like today's Amazon rainforest, Grand Staircase-Escalante may have been a biodiversity hotspot. In modern times, diversity is highest near the equator, but in the late Cretaceous, Earth's climate was much warmer. Titus speculates that in the tyrannosaurs' day, the "goldilocks zone" for vibrant, diverse life may have been right here, at around 40 degrees latitude.

"Some people think that the global average temperatures 94 million years ago were 16 degrees centigrade hotter than today. That makes the equatorial regions blisteringly hot," says Titus. "I honestly think we are sitting on peak Cretaceous tropical biodiversity here. And as you move south and north from here, it should taper off in both directions."

Titus hasn't published this idea, and before it can be tested, researchers need to excavate more fossils from around the equator, he says. But diversity does seem to be higher in the Kaiparowits than it is up north.

The Kaiparowits diversity is best illustrated by the horn-faced "ceratopsian" dinosaurs -- relatives of Triceratops whose heads are bedecked with horns and frills. For any given time slice, says Titus, the northern Laramidia habitats supported one to three known species of ceratopsian. The Kaiparowits formation in Grand Staircase-Escalante has six.

Titus thinks ceratopsians used their elaborate headgear as radiators for dissipating heat. The ornaments seem to get bigger as you go south, creating more surface area for cooling, he says. At any rate, they don't seem to be weapons, despite paleontologists' earlier assumptions, says Carolyn Levitt, paleontology collections manager at the Natural History Museum of Utah in Salt Lake City, where most of Titus's finds are stored.

"I'm telling you, if you lost one in battle and broke it off, you'd bleed to death and expose your brains," she says, gesturing at a 6-foot-long skull with horns curving outward like graceful eyebrows.

Levitt's own master's thesis research adds weight to the idea that Grand Staircase-Escalante had a gentler climate than Canada and Wyoming. Dinosaur bones from northern deposits show clear growth rings, indicating that the animals' growth slowed down each winter as they endured harsher seasonal conditions. But when Levitt examined sections of bone from horn-faced



dinosaurs that lived in Grand Staircase-Escalante, she saw no rings at all -- just smooth bone suggesting abundant year-round growth.

Bears Ears' potential

While Grand Staircase-Escalante is now famous for its dinosaurs, Bears Ears is best known for its archaeological sites and deep cultural significance to several Native American tribes. Compared to Grand Staircase-Escalante, Bears Ears has seen relatively little paleontology research, so it's not clear yet just how many stories it holds about life before the dawn of humans.

But Bears Ears is rich with paleontological potential, and not just for one slice of time, according to Rob Gay, a paleontologist who is studying Bears Ears fossils and also works as education director for the Colorado Canyons Association in Grand Junction, Colorado. The new monument contains several sets of uninterrupted strata representing a staggering swath of Earth's history.

For example, the Chinle formation that Gay studies on the south side of Bears Ears predates Titus's tyrannosaurs by more than 175 million years. Back then, dinosaurs were just getting started.

"The question is: How did these puny runts that really weren't outstanding 200 million years ago become the dominant force on Earth 10 million years later?" says Gay. "To know that, we have to know what else was alive at the time."

According to Gay, the dominant lifeforms in the Chinle formation are mostly crocodiles -- or rather, precursors of modern crocodiles that had branched out into a wide range of niches and lifestyles. Some ate plants, some walked on their hind legs, and some had giant horns sprouting above their shoulders.

Other parts of Bears Ears preserve even earlier stories from the Carboniferous period, when plants overtook the land and four-legged animals called tetrapods emerged from the sea. One particularly interesting site is in Indian Creek, now a spectacular canyon of red sandstone cliffs decorated with Native American petroglyphs. Three hundred million years ago, the climate was just entering a hot, dry spell, and Indian Creek was home to a lake nestled between sand dunes.

"Not only does it tell us about what early tetrapod life was like and that there was a major sort of climate warming that was happening during that time, it also tells us something about the climate warming that's happening today," says Adam Huttenlocker, a paleontologist at the University of



Southern California in Los Angeles. Huttenlocker has excavated fossils at Indian Creek in the past, and he is now collaborating with scientists from the Carnegie Museum of Natural History and California State University, San Bernardino to survey fossil sites in other parts of the monument. "We can go back, we can look at the fossil record, and we can see how animals are affected during a large-scale climate warming event."

The Bears Ears deposits from that period are especially valuable because they include both land and ocean deposits. Marine deposits are easier to date, because the small marine creatures preserved in them were similar throughout the whole ocean, says Huttenlocker. For example, he can compare marine rocks from Utah with marine rocks from Russia, and easily see which ones match in age. In Bears Ears, researchers can infer the age of land fossils with unusual precision by examining the marine deposits nearby.

That's part of why researchers know the age of one particularly bizarre object in the Natural History Museum of Utah. It was excavated in Indian Creek, and now it sits in a drawer looking like a knobbly toilet lid with droopy eye holes. Despite its flat shape, Carolyn Levitt insists the object is a whole skull, and proves her point by turning it over to reveal the brain case -- a roundish indentation smaller than one of the eye sockets. Although it hasn't yet been formally described and named, it most likely represents a new species from a genus of amphibians called Eryops, Levitt says.

Other Bears Ears rocks may reveal how life rebounded after the Permian-Triassic extinction, which wiped out an estimated 96 percent of ocean species. The monument contains a rare formation called the Moenkopi that was laid down less than 8 million years after the extinction, says Huttenlocker. No one has dug there yet to discover its secrets.

"If there's any place in North America that's going to tell us what happened after that extinction event, it would be in Bears Ears," he says. "If we can find more vertebrate sites in the Moenkopi, then we'll have a window into the recovery from the greatest mass extinction in the history of life."

A monumental impact

Paleontologists can get permits to conduct research on federal land, regardless of whether it is within a national monument. And according to Greg McDonald, regional paleontologist for the Bureau of Land Management in Salt Lake City, the Bears Ears designation has not made permits



any easier or harder to obtain. But in most cases, researchers have to find their own funding for projects on regular BLM land, and such funding can be hard to come by.

National monument designations don't automatically create money for paleontology, says Scott Foss, a Washington-based paleontologist who heads the BLM paleontology program. However, the proclamations for Grand Staircase-Escalante and Bears Ears both list fossils among the exceptional resources that make the areas worthy of monument status. That puts paleontology squarely within the mandate of whoever manages the land.

For Grand Staircase-Escalante and most of Bears Ears, that's primarily still the BLM -- the same agency that managed the land before. But as national monuments, the regions are now part of the National Landscape Conservation System, a well-funded BLM directorate with real money to spend on things like paleontology, says Foss.

The access to National Landscape Conservation System funds has been revolutionary for paleontology research in Grand Staircase-Escalante, says Gay. After the monument was proclaimed, the BLM built a new fossil prep lab there and hired a full-time lab manager. They also hired Alan Titus as the monument paleontologist, and he is now one of just eight full-time BLM paleontologists in the entire country, says Foss.

Monument designations also draw attention to a region and make it more competitive for funding from other sources, such as grants from the National Science Foundation and private nonprofit organizations, according to Utah State Paleontologist Jim Kirkland in Salt Lake City.

"There was virtually nothing known with Grand Staircase until it was proclaimed," says Kirkland. "And Grand Staircase has now turned out to have the most complete terrestrial upper Cretaceous record on the planet."

Now, Bears Ears is in a position similar to that of Grand Staircase-Escalante two decades ago, except that many decisions about research funding are on hold because of the political situation, including the executive order to review National Monuments, says Foss. There's no word yet on whether Bears Ears will get its own paleontologist.

However, the Trump administration's 2018 budget proposal asks for a roughly 25 percent cut in overall funds for the National Landscape Conservation System budget, and a focus on public safety, law enforcement and sportsmen's access, although the amount for paleontology is not specified.



"There's such a huge, enormous amount of uncertainty, not just in Bears Ears but all across our programs right now," says Foss. "We are just waiting to find out what's going to happen next."

Back at camp after a day of digging, Titus and his volunteers turn their attention to food and beer. The toilet, says Titus, is generally agreed to be over that way -- away from the bedrock and any future excavations by prospecting paleontologists. As the sun lowers, he stands on the edge of the plateau and looks over the landscape where he uncovered an ancient ecosystem.

There, he says, is where his team discovered the horned dinosaur species with the elaborate folded neck frill. That sandstone ridge is where they found the one that was named after him, and behind those scraggly trees is where they found the mummified hadrosaur. The club-tailed ankylosaurs came from the spot next to it, and that sagebrush-covered plain in the middle held the pachycephalosaur with its crown of spongy bone.

Titus says he sees the desert vista as the dinosaurs would have, lush and tropical.

"I hear their shrieks and cries on the wind."

BACK

7. Obama Conserved 1.3 Million Acres in Utah—Can Trump Undo That?

The Atlantic, June 14 | Robinson Meyer

In the final days of 2016, President Barack Obama made a final addition to the conserved lands of the United States.

He brought Bears Ears National Monument into existence, designating a new federally protected area of more than 1.3 million acres in southeast Utah. The park, Obama said, was chosen not only for its beauty—his proclamation spoke of "deep sandstone canyons, desert mesas, and meadow mountaintops"—but for its importance to local Native American tribes. The Navajo, the Hopi, the Ute, and the Zuni all hold the site as sacred.

As I wrote at the time, it was immediately controversial. Republican leaders in Utah have long said they wanted to protect the area too, though they wanted to avoid the more stringent requirements imposed by national-monument status. They had warned Obama against casting Bears Ears as a national monument, which they view as an abuse of federal power.



"By unilaterally locking up 1.35 million acres—an area roughly the size of the entire State of Delaware — the president has misused his authority," said Gary Herbert, the state's Republican governor.

Native leaders, meanwhile, responded in jubilation. "It actually brought tears to my face," said Eric Descheenie, a member of the Navajo nation and a congressman in the Arizona House of Representatives. "It's so hard to even try to add up what this really means. At the end of the day, there's only a certain place in this entire world, on earth, where we as indigenous peoples belong," he said of Bears Ears.

Bears Ears was not the only monument Obama made, nor was it the largest. But more than six months after its creation, it is still the most polarizing. When President Donald Trump ordered the Department of Interior in April to consider if any national monuments created since 1996 should be rescinded, many assumed that he would target Bears Ears for special consideration. Trump also called Obama's creation of many national monuments an "egregious abuse of executive power."

"It's gotten worse and worse, and now we're going to free it up," Trump added.

This week, Ryan Zinke, the secretary of the interior, delivered a preliminary report to President Trump recommending that Bears Ears be reduced in size. In the leaked copy of the memo, first published by Deseret News, Zinke does not provide specifics about how or where the monument should shrink.

It's a little unclear, however, whether Trump can do that.

The United States is very big, and a little less than a third of it is owned by the government. The Constitution gives Congress the sole responsibility to manage and dispose of all that land, but it can delegate some of that power to another branch by passing a law.

In 1906, Congress passed the Antiquities Act, empowering the president with the ability to create national monuments—a kind of second-tier national park—when federal land contains objects that are threatened by outside forces or which are especially deserving of emergency protection. The act was explicitly passed to shield sites of historical or indigenous importance from "pot hunting," in which Americans would loot artifacts from archeological sites or abandoned dwellings and then sell them on the illicit market.



Since then, presidents have used the law to create a new reserve 151 times. They have protected small sites and big ones. They have made many national monuments that then, a decade or two later, became a national park—including Grand Canyon, Bryce, Zion, Acadia, Olympic, and Grand Teton. (Many times, a president locked up land in a national monument after becoming frustrated with Congress's failure to make it into a national park first.)

A president has never undone a national monument after its creation, however. That's what Utah senators Mike Lee and Orrin Hatch have demanded Trump do to Bears Ears: completely reverse Obama's decision to designate it as a national monument.

So far, Zinke's proposal seems slightly less dramatic. He recommends that the "boundary [of Bears Ears] be revised through the use of appropriate authority, including lawful exercise of the president's authority" under the Antiquities Act.

"Rather than designating an area encompassing almost 1.5 million acres as a national monument, it would have been more appropriate to identify and separate the areas that have significant objects to be protected," Zinke says in the memo. "Additionally, many of the lands in the [monument] are already congressionally or administratively protected."

Another, longer report is due from Zinke by the end of the summer. Trump will make a final decision after that.

But it's unclear whether President Trump can actually shrink Bears Ears. Earthjustice, the country's leading environmental legal advocacy group, says it will challenge the president's authority to shrink the national monument.

"It looks like the writing is on the wall and they're going to reduce to just a fraction of isolated tracts as compared to the 1.3 million acres now," says Heidi McIntosh, an attorney at Earthjustice who has been monitoring Bears Ears since Trump's term began.

The Antiquities Act functions like a "one-way ratchet," argues McIntosh. The law allows for the creation of a new national monument, but it does not empower the president to reverse a predecessor's decision. Only Congress can undo a national monument after it has been created.

Zinke's main legal criticism of the monument seems to be that it is too large. In his memo, he chides Obama for not following the Antiquities Act's requirement that a national monument be "the smallest area compatible" to protect the objects it contains. (Many Utah residents have other



critiques of the monument—they worry that it prevents them from accessing local natural resources.)

Zinke is right that Bears Ears is quite big at 1.3 million acres. But there is plenty of precedent for presidents to create monuments that size or even larger. Woodrow Wilson established Katmai National Monument at 1.1 million acres only 12 years after the Antiquities Act was passed. Seven years later, President Calvin Coolidge created Glacier Bay National Monument at 1.4 million acres. And, more recently, President Carter designated Wrangell-St. Elias National Monument at 11 million acres in 1978. (It sits at the top of the Alaskan panhandle.)

More recently, President George W. Bush also established several enormous oceanic national monuments. Though they are mostly on the seafloor, they are dozens of times as large as Bears Ears. Papahanaumokuakea Marine National Monument, for instance, protects 89.5 million acres northwest of Hawaii.

The Supreme Court has also affirmed that there is no size restriction on national monuments. In Cameron v. United States, in 1920, it said that the United States was free to protect a very large object of scientific or cultural interest—even if a miner had been hoping to extract resources from it instead. We now know that "very large object of scientific interest" as the Grand Canyon.

Never mind whether Bears Ears is too large: Could Trump shrink it if he wanted to?

Presidents have adjusted the size of national monuments about a dozen times before. "Those were primarily very small adjustments. Sometimes lands were omitted, sometimes lands were added," McIntosh said. "And no president has made even minor boundary adjustments since Kennedy in 1964."

Since that time, too, Congress passed the Federal Land Management and Policy Act in 1976, which remade public land law and reserved more power over national monuments for Congress.

Yet there is a history of presidents tinkering around the edges of national monuments—and sometimes cutting into them wholesale. Mount Olympus National Monument on Washington's Olympic peninsula provides a good example of this. The monument, encompassing temperate rainforest and Pacific seashore, was first created by President Theodore Roosevelt in 1909. In the next two decades, it received two small, largely uncontroversial cuts, as the original designation had accidentally included some private homesteads.



But it also received one large emendation. During World War I, President Wilson cited the country's need for lumber and halved the monument in size. That action was never challenged in court—McIntosh pointed out that there were relatively few legally mobilized conservation groups at the time—but it was also short-lived. In 1938, Congress converted the monument into Olympic National Park, its modern-day name. It also empowered President Franklin Roosevelt to enlarge it to near-original size.

There's one other difference between Bears Ears and other national monuments: It was made at the behest of nearby Native American nations. Obama's designation established for Bears Ears to be governed both by five local tribes and the federal government, the first such arrangement. In his memo, Zinke hinted that he wants to preserve that structure, albeit after securing congressional approval for it.

For the tribes, securing the monument arrived at the end of a long process. In 2009, the FBI raided a private store of indigenous artifacts near Bears Ears. They had been illegally stolen from the hundreds of open cultural sites still around the area.

The affront of this looting spurred activists from the Navajo nation and other groups to push for some kind of permanent protection for the land and the resources there. They mapped the land, and organized around it. They also began working with Utah lawmakers—including Jason Chaffetz and Rob Bishop, both Republican congressmen—to grant the land a long-lasting cultural status. (More than 60 percent of Utah is federally owned public land. Bishop's proposal, the Public Lands Initiative, extended far past the Bears Ears area and was meant to designate parts of that territory for logging, development, and conservation.)

But by 2015, the indigenous activists disliked how the lawmakers proposed to split revenue from the land, and they worried its protected area was too small. They also felt left out of the negotiation process. So they approached the Obama administration about granting the area monument status.

Bishop and the Utah delegation continued to work on their proposal, though it stalled out in Congress in early 2016.

Ethel Branch, the attorney general for the Navajo Nation, said Tuesday that she wasn't sure Zinke understood the years of effort that went into securing the monument designation. The



DAILY NEWS REPORT - UTAH

Navajo had four hours to work with Jim Cason, a senior Department of the Interior official, she said. They met one-on-one with Zinke for one hour.

"It didn't seem like they understood that lengthy history in developing the monument, and talking to Obama's staff, and talking to the folks developing the Public Lands Initiative," she told me.

She also said she was unsure how Congress could extend protections to Bears Ears. "You have people like Hatch and Chaffetz and Bishop—they were so committed and they were unable to get anything [about Bears Ears] through Congress," Branch said, adding that "it's difficult for me to think" that another effort could be successful.

She also joined McIntosh in promising to challenge any attempt to reduce the current borders of Bears Ears.

It won't be clear until the end of the summer how far Zinke plans to reduce the size of Bears Ears. "There is no doubt that it is drop-dead gorgeous country and that it merits some degree of protection," he said, but said it deserves federal "multi-use" conservation and not the more sweeping limits of a national monument.

Yet even proposing to reduce it in size, and not repeal it entirely, constitues a small concession to the legal specifications of the Antiquities Act. Orrin Hatch, the senior Republican senator, had been calling for Bears Ears to be revoked entirely. On Monday, he said Zinke's announcement was "an unquestionable victory for Utah."

BACK

8. NATIONAL MONUMENTS: Bishop 'happier' if Zinke had revoked Bears Ears

E & E News, June 14 | *Kellie Lunney*

The chairman of the House Natural Resources Committee said yesterday that he was "a little" disappointed that Interior Secretary Ryan Zinke didn't recommend revoking the status of Bears Ears National Monument in his interim review.

While Rep. Rob Bishop (R-Utah) said he was satisfied with Zinke's recommendation to significantly shrink the 1.35-million-acre monument in southeastern Utah, he acknowledged to



reporters that he "would have been happier if it was completely redone." But he then added that he is "still convinced [Zinke's] probably going to do it the right way."

Zinke bought himself some time with the interim review of Bears Ears; the final recommendations, including where and by how much to reduce the monument, will come later this summer when the Interior secretary's report on 27 monuments is due.

Although Utah's Legislature adopted a resolution earlier this year encouraging President Trump to revoke the monument's status entirely, Zinke indicated on a press call Monday that he would not make that recommendation in his final report due Aug. 24. "Certainly, rescinding the monument was an option, but looking at it, there are some antiquities within the monument that I think deserve to be protected," he said (E&E News PM, June 12).

Still, Bishop said he is confident Interior will come up with the "correct" map for redrawing the boundaries of Bears Ears.

"That is time-consuming," Bishop said, "and that's what I was freaking out [about], thinking that if he did something different than what he did, I would have to come up with a map."

In the meantime, however, the chairman can focus on shepherding Bears Ears-related legislation through Congress — his ultimate goal. Zinke has said he wants Congress to weigh in on the Bears Ears site: The interim report asked lawmakers to establish co-management of the site with tribal nations, as well as to protect some portions of the monument as national recreation or conservation areas.

Bishop yesterday was eager to pursue such legislation. "The [legislative] language is ready," he said.

But he wants to talk to the rest of the Utah congressional delegation "to make sure we're all there, especially the senators." Then he joked, "So, I'll have to find them when they are awake."

Bishop said the "management aspect" of Bears Ears is "really important" to him.

"Writing down what the practices will be, and getting them into statute and not leaving it up to secretarial discretion in the future," he said, "so the next administration won't just come back with a 2-million-acre monument."



BACK

E&E/NATIONAL NEWS – FULL STORY

1. Experts: Captive breeding of sage grouse won't work

High Country News, June 14 | Angus M Thuermer Jr., Andrew Graham/Wyofile

Prominent greater sage grouse conservationists say Interior Secretary Ryan Zinke's plan to consider captive breeding of the bird would meet a dead end.

In announcing a review of federal West-wide conservation plans for the imperiled bird, Zinke last week said innovative ideas — "certainly to include captive breeding programs" — would be considered by a task force. But several persons immersed in sage grouse conservation say captive breeding hasn't worked, is inappropriate and may harm wild sage grouse populations.

Among those is Wyoming Gov. Matt Mead, who helped lead nationwide conservation by continuing the state's core-area preservation strategy to limit habitat disturbance, not raise gamefarm birds.

"I follow the lead of our scientists and experts on that who suggested that's just really not going to be something that works," Mead told WyoFile last week.

The federal grouse conservation effort concluded in 2015 with the revision of 98 Bureau of Land Management and Forest Service plans in 10 states, focused on habitat, not grouse numbers. Adoption of the plans covering 67 million federal acres kept the grouse from being listed as threatened or endangered.

"The issue wasn't necessarily a population at a point in time — it's whether the habitat was there to support a healthy population," Mead said of the federal strategy Wyoming participated in. "If we're talking about captive breeding, it sort of dismisses that there's a healthy population of birds out there. There's many, many birds."

Zinke's secretarial order calls for "integration of State and local concerns and approaches into sagebrush management and conservation on Federal lands." It asks the task force "to give appropriate weight to the value of energy and other development of public lands." A goal is "to



conserve the Sage-Grouse and its habitat without inhibiting job creation and local economic growth."

Zinke's order refers frequently to habitat and calls for an examination of invasive grasses that spread fire through sagebrush, along with a review of firefighting strategy. A listing under the ESA would put great restraints — likely greater than those imposed in the 2015 conservation plans — on what could happen in federal and private sagebrush country.

Would changes make the grouse endangered?

There's a reason grouse raising isn't part of the current strategy, conservationists say. "Sage grouse farming was never considered as part of the federal sage grouse plans because it has been completely discredited in the science," says Erik Molvar, executive director of Western Watersheds Project. "After almost a century of attempts, transplanting sage grouse has been abandoned as a viable strategy by the scientific community."

Federal law requires land and wildlife managers to preserve the habitat of wildlife, not just wildlife itself. "The purpose of the ESA is to conserve endangered and threatened species and the ecosystems on which they depend..." the U.S. Fish and Wildlife Service says in outlining the act. A species can be listed and protected if there's "the present or threatened destruction, modification, or curtailment of its habitat or range," among other reasons.

If a modified federal conservation plan would replace natural breeding with captive breeding in an effort to keep grouse off the threatened or endangered list, would that be at odds with the Endangered Species Act, which calls for preserving ecosystems?

"Yes, it's counter to the intent of the act," says Brian Rutledge, central flyway conservation strategy and policy advisor for Audubon Rockies. "What we need to invest in is restoring habitat."

Today, 50 percent of the country's original grouse range remains in sagebrush habitat, the rest disturbed or developed, he said. But the habitat's carrying capacity has diminished "by somewhere around 90 percent." That's why we have only 10 percent of the original numbers, he said.



The landscape has been fragmented "to the point it won't support the kind and number of birds that it used to," Rutledge said. "What we need to focus on, now that we've stopped the bleeding with the core-area plan, ... is [to] go back and heal the patient. We don't have a population problem, we have a habitat problem."

Further, grouse breeding could be dangerous. Among Rutledge's worries are creation of a genetically "homogenous sage grouse." Greater sage grouse genetics are varied across its range and captive breeding could disrupt that, he said.

Diseases also are a worry of captive breeding. They derailed captive breeding of endangered Attwater's prairie chicken, a species taken into the lab for captive breeding as a last resort when its population in 1996 dwindled to 42. Reticuloendotheliosis virus, an infectious disease, devastated captive broodstock and prevented releases into the wild.

Captive breeding of greater sage grouse in Colorado also ran into problems, Rutledge said. Researchers said it didn't work and didn't recommend it, he said.

The slaughter in the early 2000s of some 1,000 farm-raised Colorado elk over fears of chronic wasting disease also underscores the dangers of sickness spreading among captive wildlife. "How much closer to home do we have to get?" Rutledge asked.

Finally, there's the issue of captive grouse learning to survive. "These birds are dependent on old, seasoned females showing them the ropes," Rutledge said.

Throw a few birds at the problem

To what end would captive-raised greater sage grouse be used? One prospective breeder — Casper business and oilman Diemer True — has said they could be employed as mitigation for destruction of habitat by development. But Rutledge, who sits on Wyoming's Sage Grouse Implementation Team with True, says that's not proper.

"Yes, it will be suggested," Rutledge said. "Yes, it has been suggested. The reality is, it's not going to work." Also, supplementing populations with game-farm birds is not part of Wyoming's mitigation plan, he said.



"What's been talked about is how do we compensate for damage done," Rutledge said of mitigation. The most important element is conservation of the sagebrush itself. Many threats to greater sage grouse can be traced to habitat problems in that key landscape, he said.

Even predation of grouse — by everything from coyotes to foxes, skunks and ravens — is related to habitat, he said. Zinke said predator control would be reviewed, but Western Watershed's Molvar agreed with Rutledge that habitat is key.

"The consensus among biologists is that the natural predators of sage grouse only become an issue when human-caused habitat problems — like power lines or overgrazing — give predators an unnatural advantage," he wrote in an email to WyoFile. "In addition, a Wyoming study found that coyote-killing programs are actually counterproductive because they result in expanded populations of smaller predators that are the real problem for sage grouse."

Diseases, too, can spring from habitat problems, Rutledge said. One West Nile Virus outbreak "was entirely tracked to introduced stock tanks," he said. "That's a habitat question."

Greater sage grouse are a flagship or umbrella species that indicate the health of the sagebrush ecosystem and the vitality of some 361 species that are sagebrush-dependant, Rutledge said. Some of those other species are in worse shape than greater sage grouse, he said.

Conserving habitat, "we eliminate the risk for 361 other species," he said. If the country decides to ensure greater sage grouse persistence through captive breeding programs, "are we going to start a captive breeding program for 361 species," he asked.

Zinke said critics of the existing plans don't see habitat as paramount. "Some states have expressed a concern because the habitat issue has been emphasized while other management hasn't," he said last week, pointing to predators and West Nile virus as grouse inhibitors. Just because you have habitat doesn't mean the health of a flock is good, he said.

Thousands of Westerners weighed in on plans

Groups involved in the sage grouse conservation process in Montana were taken aback by Zinke's comments justifying the review. He spoke about anger in the West over a heavy-handed federal approach. "There is a lot of mistrust," Zinke said last week. "A lot of these local communities ... just don't think they've had a voice."



Zinke served in the Montana Senate from 2009 to 2011, representing the city of Whitefish in the northwest part of the state. He was elected to the U.S. House in 2015, as sage grouse conservation efforts were coming to a head under the specter of an endangered species listing. Zinke served in the U.S. House until being appointed Secretary of the Interior by President Donald Trump.

While Zinke wasn't part of groups designing grouse policy in Montana, he would have been aware of the process in the state, participants said.

"I believe members of the Montana delegation were kept appraised of the process as it was going on," said Glenn Marx, director of the Montana Association of Land Trusts. "Montana did approach it in a very collaborative, very transparent, very open fashion," he said, "I don't know what [Zinke] was referring to when he said other voices were left out."

The oil and gas industry played a prominent role in crafting Montana's policies to protect the birds, said Janet Ellis, who helped the state develop conservation strategies as both a state legislator and senior director of policy for the Montana Audubon Society. She's also uncertain why Zinke would have felt some Western voices were not heard. "I don't know what that means," she said. "Maybe other states?"

A hard copy of one final federal conservation study covering much of Montana and the Dakotas — hundreds and hundreds of pages long — was sent to Rep. Ryan Zinke, according to the document. In that planning process, the Lewiston, Montana, BLM office considered 257 substantive comments found in letters from 40 persons, the document said. Similar involvement engaged communities, individuals, officials and organizations across the 11 states.

Mead is aware some groups are still critical and may have caught the secretary's ear. Just because there was collaboration on the West-wide effort, "that's not to say that everybody agrees with where it's ended up," the governor told WyoFile. The Wyoming Stock Growers Association, for example, sued the BLM and Forest Service over the 2015 plans, claiming laws weren't followed, and their interests weren't properly considered, according to Courthouse News Service.

The comments from Zinke last week echoed a statement he made in 2015, when he was Montana's congressman and then-Secretary of the Interior Sally Jewell unveiled plans to protect the bird. "Once again the Obama Administration is undermining the authority of sovereign states



to manage our own land, resources, and wildlife with one of their signature 'Washington knows best' plans," Zinke wrote in a statement. "I support a state-based plan that gives local stakeholders a seat at the table."

Zinke is responding to orders from Trump, not reacting to Western voices, said Land Tawney, the CEO of Backcountry Hunters & Anglers in Missoula, Montana.

"This is coming from his boss," Tawney said, "and they're trying to really take away any restrictions for oil and gas development which in some cases this will but mostly it won't."

Tawney worries what a rollback of what he called "one of the largest collaborative efforts here in the West" could mean for the delicate relations between the region's conservationists and industry.

"If that collaborative effort is not honored that's not only bad for the bird ... it's also really bad for the collaborative efforts across the West that are still ongoing," he said.

Mead last week said Western governors had called the secretary to talk about his review. "He wants it to be a state initiative, state-driven," the governor said.

"I don't think anybody says it's perfect," Mead said of existing plans. "There's room for improvement, I think, in a number of ways. There can be changes but we have to move forward carefully on this because already so much has been put into it."

Rutledge said Zinke could become educated. "What we have is an opportunity for learning," he said. "The governors are going to help get this right ... help (Zinke) with a learning opportunity."

WyoFile is a nonprofit news organization focused on Wyoming people, places and policy.

BACK

2. OIL AND GAS: Interior halts restrictions on methane emissions

E & E News, June 14 | Ellen M. Gilmer

The Trump administration has indefinitely postponed upcoming deadlines for oil and gas companies to slash greenhouse gas emissions on public lands.



In a Federal Register <u>notice</u> to be published tomorrow, the Bureau of Land Management announced that companies will not have to comply with new rules for venting, flaring and leaking of methane from their operations on public and tribal lands, pending judicial review.

The news comes less than a day after U.S. EPA proposed a two-year freeze of its own methane restrictions for new oil and gas operations across the country (Energywire, June 14).

BLM's rule, known as the Methane and Waste Prevention Rule, was finalized by the Obama administration last year and immediately faced legal challenges from industry groups and Western states. The rule narrowly escaped being scrapped through the Congressional Review Act in May (Energywire, May 11).

Now, BLM is rethinking the rule and pausing January 2018 compliance deadlines for measuring flared gas, upgrading equipment, capturing vapors from storage tanks, and implementing leak detection and repair programs.

Other provisions of the rule are already in effect, including general restrictions on venting and flaring, well maintenance, and royalty calculations. Those remain unaffected by the delay.

Industry groups including the American Petroleum Institute and Western Energy Alliance earlier this year sent letters to Interior Secretary Ryan Zinke requesting the stay. They say the rule's provisions are overly burdensome and will force some companies to halt operations (Energywire, May 19).

BLM is delaying the compliance dates under an Administrative Procedure Act provision that allows agencies to pause challenged rules pending judicial review.

"Given this legal uncertainty, operators should not be required to expend substantial time and resources to comply with regulatory requirements that may prove short-lived as a result of pending litigation or the administrative review that is already under way," the Federal Register notice says. "Postponing these compliance dates will help preserve the regulatory status quo while the litigation is pending and the Department reviews and reconsiders the Rule."

Environmental groups that support the Obama-era rule have argued it's too late for the Trump administration to invoke that Administrative Procedure Act provision because, while the various compliance deadlines are phased in over time, the rule officially took effect earlier this year. They have promised to sue over any attempt to sideline the restrictions.



Earthjustice attorney Robin Cooley, who has been defending the methane rule court, slammed the administration's move.

"Once again the Trump administration is bowing to the wishes of the oil and gas industry with no concern for public health and the environment," she said in an email. "Methane regulations are common sense, cost effective standards that reduce pollution while saving money. It is imperative that these rules go into effect, and we will be in court fighting every step of the way."

Industry, meanwhile, celebrated the news.

"Western Energy Alliance is very pleased that the Interior Department has listened to the concerns of companies having to comply with a rule that is likely to be overturned in court or changed significantly through the rulemaking process," alliance President Kathleen Sgamma said in an email, adding that industry will continue working to improve methane capture rates.

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3. OIL AND GAS: Industry groups support EPA in methane litigation

E & E News, June 14 | Amanda Reilly

The oil and gas industry today moved to defend the Trump administration's decision to suspend Obama-era methane standards.

The American Petroleum Institute and the Interstate Natural Gas Association of America filed motions to intervene in litigation brought by green groups in the U.S. Court of Appeals for the District of Columbia Circuit.

API <u>told</u> the court it wanted to avoid "unwarranted or unsupported imposition of potentially burdensome and costly emission control obligations."

INGAA, which represents natural gas transmission pipeline companies, likewise said it was concerned that "absent the stay [companies] must comply with the fugitive emission requirements."

At issue is EPA Administrator Scott Pruitt's decision earlier this month to grant a 90-day delay in key provisions, including fugitive emissions requirements, in the Obama administration's 2016 methane rule for new oil and gas operations.



Environmentalists — the Clean Air Council, Earthworks, the Environmental Defense Fund, the Environmental Integrity Project, the Natural Resources Defense Council and the Sierra Club — filed a lawsuit earlier this month (Greenwire, June 5).

The green groups also asked the D.C. Circuit for an emergency stay of EPA's decision, arguing that the agency had no authority to pause the requirements and that the decision would cause irreparable harm.

As the litigation is pending, Pruitt yesterday announced that, on top of the three-month stay, EPA would further delay the rule's fugitive emissions, pneumatic pumps and professional engineer certification provisions by two years.

Environmental groups are also expected to sue the Trump administration over that two-year delay (Energywire, June 14).

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4. CARBON CAPTURE: 15 Dems press for funding 'at the highest possible level'

E & E News, June 14 | Christa Marshall

Senate Democrats and renewable groups are pressing congressional appropriators to protect Department of Energy funding for carbon capture, utilization and storage from steep budget cuts.

In a letter yesterday led by Sen. Heidi Heitkamp (D-N.D.), 15 Democrats urged Sen. Lamar Alexander (R-Tenn.) and Dianne Feinstein (D-Calif.) to fund carbon capture and sequestration programs "at the highest possible level" in fiscal 2018 to help the United States keep its competitive edge and keep carbon dioxide levels manageable.

DOE should expand its focus to examine ways to utilize captured CO2 and consider emissions from coal, natural gas and industrial facilities, they added.

The Trump administration has proposed slashing DOE fossil research and development from more than \$600 million to \$280 million. Research on carbon capture and carbon storage, specifically, would fall by more than 80 percent. Supporters of the technology say that DOE plays a critical role in helping push down costs that have been prohibitive for many projects.



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"Continuation of funding for both research and development and pilot scale field testing is necessary to advance critical CCUS technologies to the next stage including development of direct air capture technologies," states the letter.

Democratic Sens. Sheldon Whitehouse of Rhode Island, Dick Durbin and Tammy Duckworth of Illinois, Joe Manchin of West Virginia, Sherrod Brown of Ohio, Maggie Hassan of New Hampshire, Joe Donnelly of Indiana, Bob Casey of Pennsylvania, Tim Kaine and Mark Warner of Virginia, Chris Coons of Delaware, Jon Tester of Montana, Al Franken and Amy Klobuchar of Minnesota, and Cory Booker of New Jersey also signed the letter.

The missive is one of many flowing to appropriators as Congress weighs the details of President Trump's fiscal 2018 plan. Many Republicans declared the president's budget dead on arrival, and it remains unclear whether any of his proposed DOE cuts will stick. Next week, Energy Secretary Rick Perry is scheduled to testify before the Senate Energy and Commerce Committee.

Also, multiple renewable groups sent a separate letter yesterday to the leaders of the House and Senate appropriations committees warning of the impacts of budget cuts to the National Renewable Energy Laboratory, Office of Energy Efficiency & Renewable Energy, and Advanced Research Projects Agency-Energy, which is targeted for elimination. The Trump administration is proposing an approximate 70 percent cut to EERE.

"This is a particularly poor time to reduce research and development investment in energy, because the nation's aging electricity system requires significant new investment in modern infrastructure. NREL and the other national labs are at the forefront of the development of many of the new technologies and software important to a high-performing and reliable grid system," states the document from the American Council on Renewable Energy, American Wind Energy Association, Geothermal Energy Association, National Hydropower Association and Solar Energy Industries Association.

BACK

5. COAL: Worldwide demand falls again

E & E News, June 14 | Adam Vaughan, The Guardian

Global demand for coal has fallen for the second consecutive year, according to a BP study, helped by the US and China burning less of the dirtiest fossil fuel.



The UK was described as the "most extreme example" of the trend away from coal, which has resulted in use of the fuel returning to levels not seen since the start of the industrial revolution.

The 1.7% fall in worldwide consumption in 2016 marks a striking reversal of fortune for coal, which was the largest source of energy demand growth until four years ago, BP said.

Presenting the 66th edition of BP's annual statistical review of energy, the oil company's chief economist, Spencer Dale, said: "It feels to me like we're seeing a decisive break with coal, relative to the past. I think the big story here is coal getting squeezed."

In the US, coal has been crowded out in power generation by cheaper, cleaner gas from the fracking boom and even US coal executives believe Donald Trump's promise to bring back jobs in the industry cannot succeed.

Coal consumption has now been declining for three years in China, as its economic boom and output has tailed off in energy-intensive sectors such as iron, steel and cement.

The country's decreasing reliance on the fuel, large population and enormous investment in renewables mean it is increasingly being seen as a global leader on climate change, after the US withdrew from the Paris agreement earlier this month.

In the UK, three major coal power stations were wound up last year after a carbon tax was introduced and the last three underground coal mines closed.

British coal consumption fell by 52.5% in 2016 and the trend away from the fuel has continued this year, with the first coal-free day since the 19th century.

Dale said: "UK coal has gone through a complete cycle from the 1800s to now. I know it's popular to criticise the UK [on energy policy] but part of this [decline in coal] is the rise in the carbon floor price introduced in 2015 and continued in 2016. The message from that is prices work."

Dr Jonathan Marshall, an analyst at the Energy and Climate Intelligence, a UK-based thinktank, said the shift away from coal was striking. "The US saw an astonishing 9% fall in demand, while Chinese hunger for energy is being tempered by moves to a more sustainable growth pathway and the rapid expansion of renewables, which spells even further trouble for coal in the years to come," he said.



Coal has also been squeezed globally in recent years by the rapid growth of renewable power generation, which BP found had continued apace last year.

Wind, solar and other renewable power sources grew faster than any other fuel at more than 14% in 2016, slightly below the 10-year average.

However, energy demand growth globally was weak, at only 1%, almost half the 10-year average. Nearly all the growth came from developing countries, with China and India accounting for around half of new demand.

As a result, global carbon emissions flatlined for the third year in a row. BP called the stalled emissions "a very significant break from the past", but acknowledged that they would need to fall if countries are to meet the Paris deal's goal of keeping temperature rises in check.

Worldwide, oil consumption grew by 1.5%, driven by stronger-than-usual growth in rich countries, but production growth was weak in the face of low oil prices. As a result, oil supply and demand came closer into balance last year.

The economist said he believed the recent deal by members of the oil cartel Opec to continue cutting output would begin to make inroads into global oil stocks towards the end of 2017.

However, a new report by the major oil producers admitted that the rebalancing of supply and demand had happened at "a slower pace" because the US was producing more oil on the back of higher prices.

Dale compared US oil production to a 1970s toy, the Weeble, whose slogan was "Weebles wobble but they don't fall down". While the American oil industry had cut back rapidly in the face of low oil prices last year, it was now also bouncing back fast, he said.

The price of a barrel of oil stood at \$48.28 on Tuesday, compared to an average of \$53 this year.

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